

**Honeywell**

**ADEMCO<sup>®</sup> Optiflex**  
**Video Controller**

**Installation and Setup Guide**



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# General Information

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## In This Section

◆ *Introduction to Optiflex*

◆ *Optiflex Typical System Block Diagram*

◆ *Optiflex Features*

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## Introduction to Optiflex

Optiflex is an interactive Video System that provides multiplexed local and remote video monitoring for up to six cameras. It can temporarily save up to 10 frames from each of the six cameras (video frames are stored internally in JPEG format) at a rate of one frame per second. Cameras can be triggered either by an external voltage source, or by system events from a Honeywell Vista security system (e.g., burglary alarm at front door). Optiflex can also interface with a Symphony Advanced User Interface via Ethernet to display video on demand. Images may also be viewed on a stand-alone video monitor if desired.

## Optiflex Features

### General Features

- Support for up to six camera inputs
- One Monitor Output
- Integral 4204 Relay Module capability
- Selectable Dwell Time for Guard Tour Viewing (sequential scanning of multiple cameras)
- Time and Date Stamping
- Camera Identification
- Local and/or remote viewing capabilities
- Video captures (up to 19 captures of 10 frames each) viewable through Optiflex Connect (remote viewing) or Optiflex Direct (local viewing on PC)

### Secure Remote Viewing

- Firewall friendly installation
- Video Transmission via Ethernet
- Remote viewing of multiple locations using Optiflex Connect
- Password Protection
- Selectable Single or Multiple Display




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Optiflex Connect is required for remote viewing of video images over the Internet. Optiflex Direct is required for local viewing on a PC. Neither is required for local viewing at a monitor connected directly to the Optiflex unit. For information on how to obtain these services and set your system up for remote viewing and local viewing on a PC, log on to <http://www.security.honeywell.com/hsce/alarmnet/optiflex>.

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## Optiflex Typical System Block Diagram

A typical Optiflex System Block Diagram is shown in Figure 1. Optiflex can be used in a variety of applications. It can be:

- connected through an Ethernet hub/router to a PC or Symphony for remote viewing
- programmed in the control panel to be triggered by selected events of the security system, and viewed locally on a Symphony connected to the security system control panel
- used as a standalone system with only a monitor or a Symphony for local viewing
- configured for all of the above.

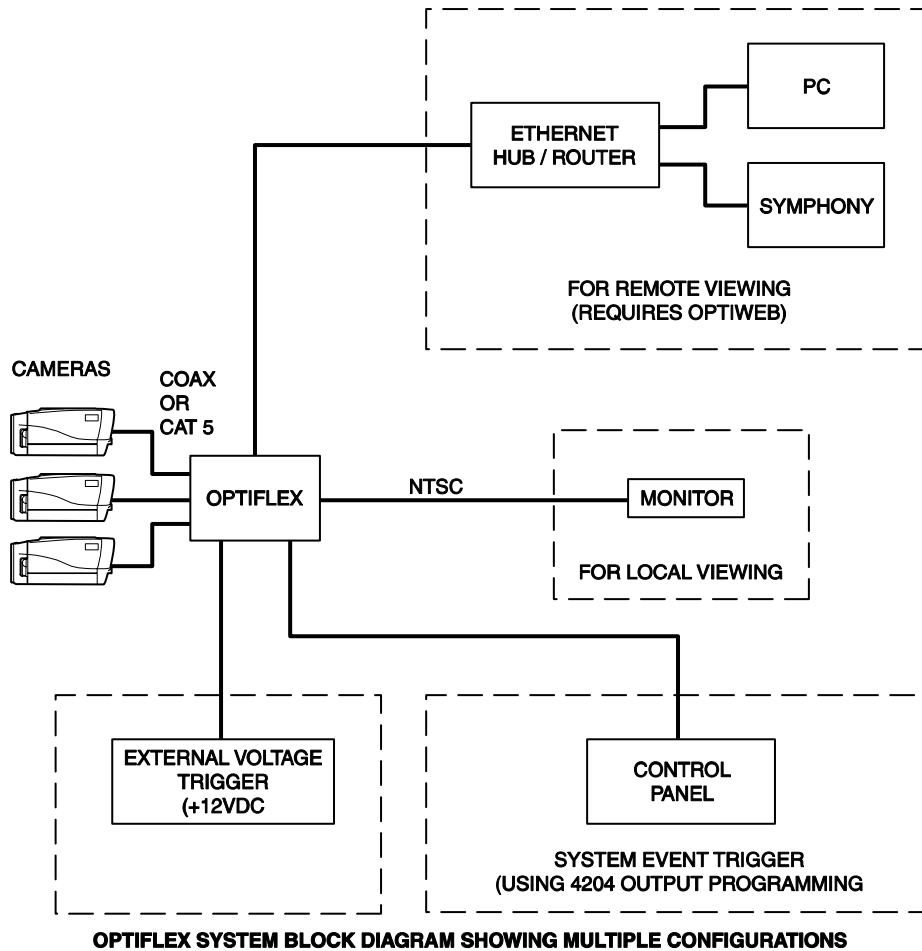


Figure 1. Optiflex System Block Diagram Showing Possible Configurations

# Mounting, Wiring, and Setup

## In This Section

◆ *Setup Considerations*

◆ *Wiring and Setup of Optiflex*

◆ *Mounting Optiflex*

## Setup Considerations

Cameras connected to Optiflex can either be triggered by system events from a Honeywell Vista control panel, from the voltage triggers provided, or both. Optiflex can also be used without any triggers at all, if the system is configured to automatically scan the cameras one at a time, or if the cameras are always on. If using the voltage triggers, refer to the table below to determine which camera each voltage trigger turns on.

Voltage Trigger	Function
1	Captures Video on Camera 1
2	Captures Video on Camera 2
3	Captures Video on Camera 3
4	Captures Video on Camera 4
5	Captures Video on Camera 5
6	Captures Video on Camera 6
7	NTSC Advance
8	Captures Video on All Cameras

If using a Honeywell Vista control panel, the cameras are turned on using Output (relay) Programming commands in the control panel. To accomplish this, enable a 4204 Relay Module in the system's Device Programming Mode as Device Address 12. Then program eight logical relays and point to the same four physical relays twice, programmed as shown in the table below, using system events or zones/zone lists as desired to turn on the relays as shown below. Cameras are turned on through the ECP (Data In and Data Out) connections (See "Wiring and Setup of Optiflex") in this section, and the control panel's Programming Guide for information on how to program output relays.

4204 Output Command (4204 on ECP Address 12)	Function
Relay 1: Turn ON for 2 seconds	Captures Video on Camera 1
Relay 2: Turn ON for 2 seconds	Captures Video on Camera 2
Relay 3: Turn ON for 2 seconds	Captures Video on Camera 3
Relay 1: Continuous Pulse	Captures Video on Camera 4
Relay 2: Continuous Pulse	Captures Video on Camera 5
Relay 3: Continuous Pulse	Captures Video on Camera 6
Relay 4: Continuous Pulse	NTSC Advance
Relay 4: Turn ON for 2 seconds	Captures Video on All Cameras



- Voltage Trigger and Output Programming commands are interchangeable for turning on a camera.
  - “All Cameras” function captures a single frame from each camera.
  - NTSC Advance function allows you to step through the video of all cameras sequentially, one camera at a time, and then the Guard Tour. It does not support video capturing.
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## Mounting Optiflex

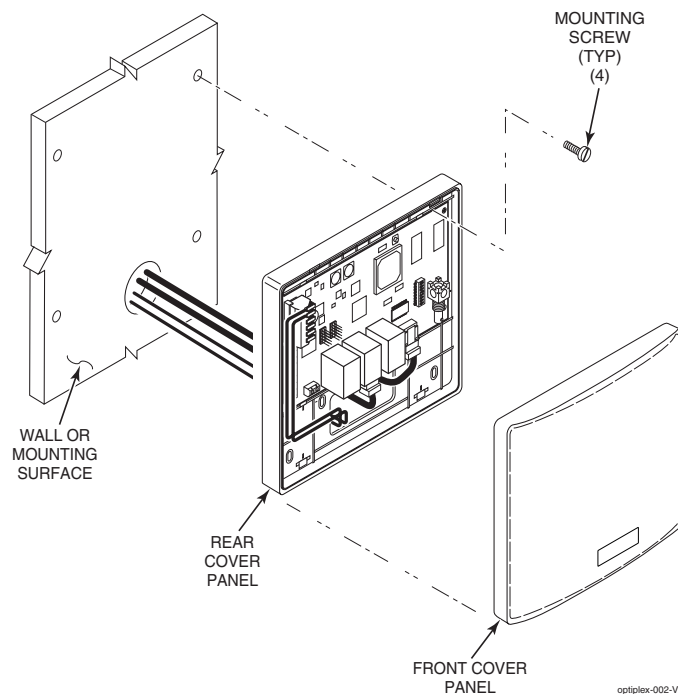
Optiflex must be mounted **indoors**. To mount Optiflex, see Figure 2 and complete the following steps:

1. Detach the case back by pushing up into the two tabs located at the bottom of Optiflex with the blade of a screwdriver while pulling the case back and case front apart.
  2. Locate the case back over the mounting surface such that the opening in the case back is aligned with the wire/cable access opening (in the mounting surface) while passing the wires/cable through the opening in the case back.
  3. Secure the case back to the mounting surface using four screws (supplied).
- 



Prior to attaching the case front to the case back, be sure to wire the Optiflex as described in the "Wiring Optiflex" paragraph in this *section*.

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**Figure 2. Mounting Optiflex**



## Wiring and Setup of Optiflex

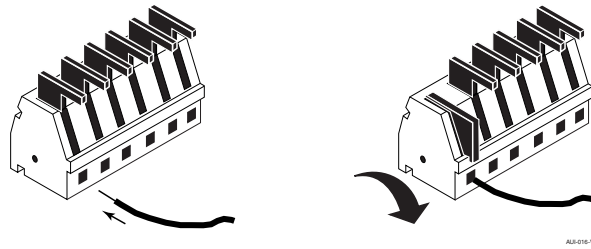
Before wiring Optiflex, make sure power is turned off and review the important notes below.

# UL

1. Use a Listed Class 2 power supply suited for the application (see Section 5: Specifications).
2. *Panel triggered UL Installations:* Optiflex may be connected as a supplemental device to listed fire and/or burglar alarm control panels that support the 4204 relay module except as noted below.
  - In UL installations, Optiflex may be connected to panels that have ground fault detection only if the local authority having jurisdiction allows the ground fault detection feature to be disabled.
  - In non-UL installations requiring ground fault detection, when possible, use cameras powered by a power source such as a plug-in transformer that is not earth grounded and isolate the camera's mounting brackets from earth ground. Connect a video ground loop isolation device such as Vicon's V235GLTA Ground Loop Transformer to the coaxial cable that runs between Optiflex and the video monitor or recorder (or camera if required) causing the ground fault. Video ground loop isolation devices are not UL listed and may not be used in UL installations.



Optiflex is supplied with a header connector. Insert wires into the connector and secure by placing the header arms in the down position (see Figure 3). When all wires are secured, mount the header on Optiflex by snapping into place.



**Figure 3. Header Connector**

To wire Optiflex, refer to the Summary of Connections diagram at the rear of this guide and do the following.

1. Connect the wires to the header as follows:
  - a. Connect the (+) terminal of the supplementary power supply to header position 1 (+12VDC terminal of Optiflex (red wire)).
  - b. Connect the (-) terminal of the supplementary power supply to header position 2 (Gnd terminal of Optiflex (black wire)).



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- A separate 12VDC supplementary power supply is strongly recommended. Failure to provide 12VDC, 1 A (minimum) can result in Optiflex not functioning correctly.
  - If cameras are to be powered by Optiflex, total current cannot exceed 1A.
  - **MAKE SURE ALL SYSTEM GROUNDS ARE CONNECTED TOGETHER!**
- 

2. If using system events from a Honeywell Vista control panel to turn on the cameras,
  - c. Connect the Data In terminal of the control panel to header position 3 (Data Out terminal of Optiflex (green wire)).
  - d. Connect the Data Out terminal of the control panel to header position 4 (Data In terminal of Optiflex (yellow wire)).

**UL**

Use a Listed cable/DSL router suited for the application.

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3. If using remote viewing over Ethernet, connect the LAN cable (Category 5) between the Optiflex Ethernet connector and the hub/router LAN connector.
4. Connect a cable (Category 5) from the camera to one of the Optiflex camera connectors. Up to six cameras can be connected, one to each port.



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Optionally, coaxial cable may be used for video wiring. Use Honeywell part number OPTICOAX-1 (single coax to RJ45) or Honeywell part number OPTICOAX-3 (triple coax to RJ45).

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5. Connect coax from the composite video out connector on Optiflex to the composite video in connector on the monitor. If the monitor does not have a composite video connection, you can make the conversion using an RF modulator cable, available from a general electronics store.
6. If using auxiliary voltage triggers instead of (or in addition to) panel events to turn on the cameras, connect active high voltage trigger wiring to the 9-pin block. See *Section 8: Summary of Connections* for connection information.
7. Set DIP switches according to desired operation, referring to the tables that follow.

**NTSC Output Configuration**

Selects either one camera or guard tour (camera scanning) for default local viewing through a monitor.

Dip Switch	Cam-1 View	Cam-2 View	Cam-3 View	Cam-4 View	Cam-5 View	Cam-6 View	Guard Tour	Reserved
1	OFF	ON	OFF	ON	OFF	ON	ON	OFF
2	OFF	OFF	ON	ON	OFF	OFF	ON	ON
3	OFF	OFF	OFF	OFF	ON	ON	ON	ON

**NTSC Guard Tour Mode (Camera Scanning Mode) – Camera Dwell Time**

Selects the amount of time to remain on each camera before scanning to the next.

Dip Switch	2 sec	4 sec	8 sec	16 sec
4	OFF	ON	OFF	ON
5	OFF	OFF	ON	ON

**NTSC Guard Tour Mode – Camera Selection**

Dip Switch	Use All Six Cameras for Guard Tour	Use First Four Cameras for Guard Tour
6	OFF	ON

- Turn on the power source. Wait approximately 30 seconds while the Optiflex software loads and the video sources are detected. During this time Optiflex scans for cameras, and if they are detected begins monitoring them. If they are not detected, they will not be monitored.



- During the boot-up process the cover should be removed to enable the installer to view status LEDs.
- If a new camera is added after the initial boot-up process, power must be turned off and reapplied for the new camera to be detected.

- After the unit is powered up, check the following:

Power LED is ON.

Camera LED is ON for each connected camera.

If connected to the Ethernet hub/router Network LINK LED is ON.

Network SELECT, TX and RX LEDs may be flashing.



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Optiflex can be reset to its default settings by pressing and holding the top reset button for 10 seconds. The system will automatically reboot to the default settings

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# Setting Up Optiflex Using Symphony

## In This Section

- ◆ *How to Select Video from the System Options*
- ◆ *How to Set Up Video Options on the Symphony*

## How to Enable Video on Symphony

Symphony can either be used to view video events locally when attached to a Honeywell Vista control panel, or to view events remotely over the Internet using Optiflex Connect. In either case, follow the steps below to allow the viewing of video events through Symphony.

Symphony allows you to place buttons on the "Home" screen. The **SECURITY** button is always displayed and cannot be removed. Buttons that can be added are Video, Lighting, and Heating/Cooling. Prior to Video setup, the "Home" screen **VIDEO** button should be selected from the **Options** screen. To avoid confusion to the user, only buttons whose options are functional in the system should be displayed. To enable video, do the following:

1. Press the **SECURITY** button on the "Home" screen. The "Arming" screen is displayed.
2. Press the **MORE CHOICES** button. The "More Choices" screen is displayed.
3. Press the **SETUP** button on the "More Choices" screen. The "Setup" screen is displayed.
4. Press the **ADVANCED SETUP** button. The **Enter Authorized Code:** authorization screen is displayed.
5. Enter your 4-digit Installer code. The "Advanced Setup" menu screen is displayed.
6. Press the **Central Station** button. The "Central Station" menu screen is displayed.
7. Press the **Options** button on the "Central Station" screen. A pop-up window is displayed with options for selecting **Lighting**, **Heating/Cooling** and **Video**. Click on the button corresponding to Video. A checkmark will appear in the button indicating that the video option has been selected.
8. Press the **Done** button to accept the setting. Symphony returns to the "Central Station" menu screen.

## How to Set Up Video Options on Symphony

1. Press the **SECURITY** button on the “Home” screen. The “Arming” screen is displayed.
2. Press the **MORE CHOICES** button. The “More Choices” screen is displayed.
3. Press the **SETUP** button on the “More Choices” screen. The “Setup” screen is displayed.
4. Press the **ADVANCED SETUP** button. The “Enter Authorized Code:” screen is displayed.
5. Enter your 4-digit Installer code. The “Advanced Setup” menu screen is displayed.
6. Press the **Video Setup** button. The “Video Setup” screen is displayed.
7. Edit Camera-1 name and label and position. Save the data. Repeat this for each camera.
8. Select default camera for local viewing on Symphony.
9. Select NTSC default camera for NTSC composite monitor viewing.



In order to enable remote viewing over the Internet using either Symphony or a PC, you must obtain Optiflex Connect through AlarmNet. For information on how to set your system up for remote viewing, go to <http://www.security.honeywell.com/hsce/alarmnet/optiflex>.

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# Operational Status Indicators

## Camera Status LEDs

Cameras 1 – 6 LEDs

ON – Camera detected

OFF – No camera detected

Fast Flashing – Camera being viewed

Slow Flash – Camera lost

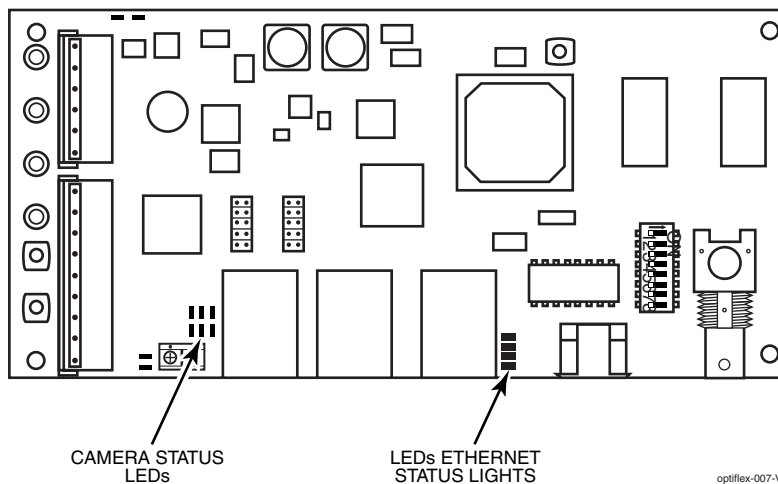
## Network Status LEDs

LINK – ON when Ethernet link is detected and OFF when Ethernet link is not detected.

SELECT – Flashing indicates Ethernet Controller activity.

RX – Flashing indicates data being received over the Ethernet connection.

TX – Flashing indicates data being transmitted over the Ethernet connection.



## Optiflex Status LEDs

### Camera Status

Off – All detected cameras are connected

Flashing – At least one camera lost.

### Camera Activity

On – At least one camera is detected

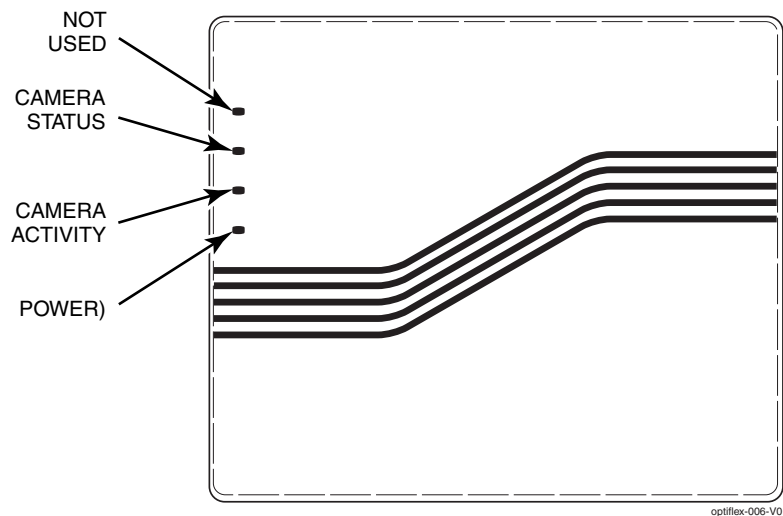
Off – No cameras detected

Flashing – At least one camera is being viewed

### Power

On – power applied to Optiflex

Off – No power applied to Optiflex





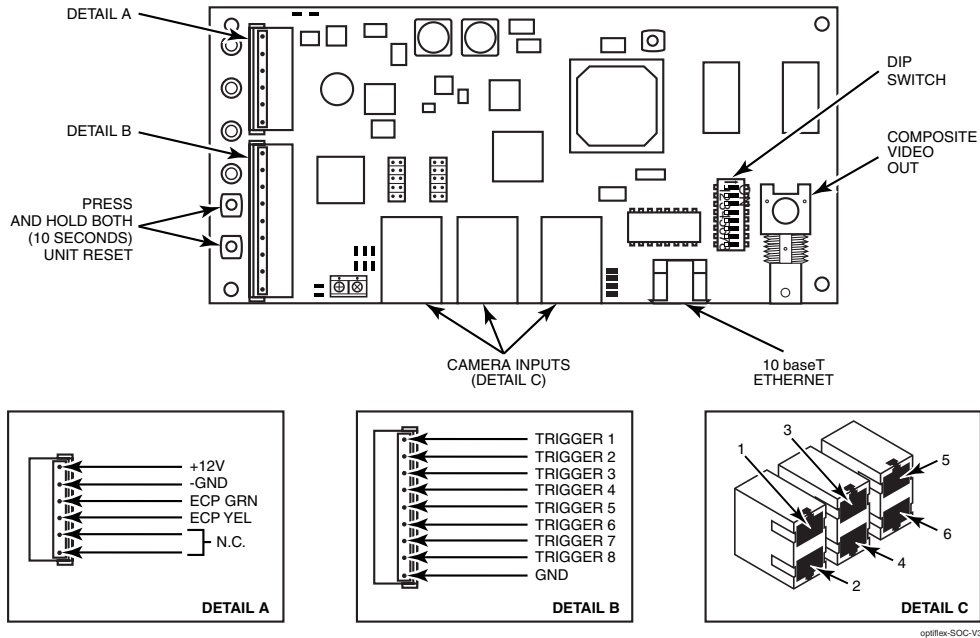
# Specifications

## Specifications

<b>MECHANICAL</b>	
Dimensions:	
Width	7 ½ inches
Height	6 ½ inches
Depth	1 ¼ inches
<b>ELECTRICAL</b>	
Operating Voltage:	
Power:	12VDC nominal
Video:	1V p-p Unbalanced
Current:	600mA, without camera 1.0A maximum with cameras being powered by Optiflex
<b>VIDEO</b>	
Video Standard:	NTSC
Video Inputs:	Six RJ45 connectors
Resolution:	Single camera - 320 x 240, Quad Display – 160 x 120
Video Storage:	Flash Memory – 19 captures of up to 10 frames each (oldest images are deleted when buffer is full)
Local Refresh Rate:	Four frames/second for single camera viewing. Quad view approximately one frame/second.
Compression Technology:	JPEG
<b>NETWORK</b>	
WAN/LAN Interface:	10 Base-T Ethernet
<b>TRIGGERS</b>	
Event Driven Video Capture	Eight 12VDC positive triggers Eight integrated 4204 style relays for use with Honeywell compatible Vista Control Panels



# Summary of Connections



optiflex-SOC-V3

## Trigger Data

Function	Voltage Trigger (+12VDC)
Camera 1	1
Camera 2	2
Camera 3	3
Camera 4	4
Camera 5	5
Camera 6	6
NTSC Advance	7
All Cameras	8

## DIP Switch Settings

### NTSC Output Configuration (DIP Switch 1 – 3)

Dip Switch	Cam-1 View	Cam-2 View	Cam-3 View	Cam-4 View	Cam-5 View	Cam-6 View	Guard Tour	Reserved
1	OFF	ON	OFF	ON	OFF	ON	ON	OFF
2	OFF	OFF	ON	ON	OFF	OFF	ON	ON
3	OFF	OFF	OFF	OFF	ON	ON	ON	ON

### NTSC Guard Tour Mode – Camera Dwell Time

Dip Switch	2 sec	4 sec	8 sec	16 sec
4	OFF	ON	OFF	ON
5	OFF	OFF	ON	ON

### NTSC Guard Tour Mode – Camera Selection

Dip Switch	Use All Six Cameras for Guard Tour	Use the First Four Cameras for Guard Tour
6	OFF	ON



# ***NOTES***

# ***NOTES***

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